Transfer of Online Learning to Performance in Variable Application Environments

Rodney J. Merkley University of Illinois at Urbana-Champaign

Susan Nichols Western Illinois University

The use of online learning (OL) has increased dramatically in the last decade; however, many instructional methods used in OL training design have not been appropriately applied or developed. Complicating this phenomenon, learners of different organizations often find the application of training content problematic in variable application environments because application of instructional content is dependant upon the organization or other environmental characteristics. An effective OL instructional methodology for variable application environments is presented.

Keywords: Learning Transfer, Online Learning, Instructional Design

A variable learning application environment exists when learners of different organizations are presented with identical learning content, but are required to apply the newly learned competencies (knowledge, skills, abilities) in a workplace setting differently depending upon the organization's resources, the general environment, or other characteristics. The variability in learning application environments often requires learners and organizations to expend additional resources to develop the specific competencies required in a particular organizational setting. The context learning strategy instructional methodology (CLIM) attempts to integrate the specific competencies required by the learner's individual application environment into general competency training. The CLIM not only facilitates individual learning but enables the learner to learn specific job-task competencies for a particular organization. The CLIM design is presented and the first part of a two part study is presented to provide support for the design in an online learning training program.

Problem Statement

Online learning (OL) has been used to provide training to learners who will ultimately transfer new competencies to a specific workplace setting. The increased use of OL training programs has been primarily economic in terms of reducing travel, facility, and personnel time costs, as well as enabling the learner and organization a degree of flexibility in completing and delivering training material (Yoon, 2003). Unfortunately, research suggests that the rush to realize the cost-effectiveness and the relatively new delivery format of OL training may have marginalized effective instructional design practices for OL environments (Johnson & Aragon, 2003; Macpherson, Elliot, Harris, & Homan, 2004; Mioduser & Nachmias, 2002). Many OL training programs appear to incorporate the same instructional methodologies used in face-to-face classroom settings, rely heavily upon automated feedback and facilitation, and consistently fail to integrate the specific needs of the learner and organization (Mioduser & Nachmias, 2002). The utilization of many instructional methods originally designed for face-to-face classroom training environments has generally been viewed as ineffective in OL settings (Dabbagh, 2004). The reliance upon automated feedback systems, while convenient, and the failure to integrate the specific needs of the learner and organization may decrease the motivation of the learner to learn or implement the training content (Doerksen, 2002).

OL training courses completed by learners within a single organization or by learners applying training content to a similar environment may utilize an instructional design incorporating the specific organizational or environmental competencies necessary to achieve the goals and objectives of the training program. However, OL training completed by learners of different organizations or when the learners will apply the training content in variable application environments, such as different organizations or in pluralistic environments, the training content is often presented in general terms and absent of the necessary specificity to provide the learner and the organization with an appreciable return on the training investment. For example, organizations of similar function, such as public service (i.e., law enforcement, public works, fire services) or emergency services (i.e., hospitals, ambulance service,

hospice), often develop specific policies and practices governed by the legal system, internal management, and the local consumers of the service. These policies/practices of the organization will ultimately govern how learning content gained in training courses is transferred to actual on-the-job performance or applied in the organization. When the instructional design of a training course ignores the differences of policies/practices of organizations, supplemental training, organizational resources, and time are required to develop the learner to successfully transfer the training content to performance in the learner's specific organization or environment.

The problem confronting OL instructional designers is multifaceted. Instructional designers must recognize different instructional methodologies must be incorporated in OL training environments. These designs must consider the application or transfer environment of the learners, or the organization will be forced to provide supplemental training to learners, which will require additional organizational resources. The contextual learning instructional methodology presented in the subsequent section provides an effective OL instructional design methodology that can be used in variable application environments.

Overview of the Contextual Learning Instructional Methodology (CLIM)

The CLIM design was developed to incorporate the specific learning demands of individual learner and organization into an effective instructional methodology in variable application environments. The CLIM design consists of a required cognitive component and an optional field component. The cognitive component requires the learner to locate and review specific organizational policies/practices as they pertain to an explicit training topic. The learner will summarize the policy/practice and provide the course facilitator with the actual policy/practice and the summary. The learner will subsequently apply the organizational policy/practice to several practical case scenarios, which will require the learner to articulate a response to specific case scenarios as governed by the learner's organizational policy/practice. The optional field component may require the learner to perform an "external activity" in which the learner performs a specific job related function on-site.

An illustration of how the CLIM design is presented to provide the reader with further clarity. Consider an example of a statewide OL training program designed to provide the minimum skills necessary to become a certified law enforcement officer. One course within the training program would outline the policies/practices used to involuntarily admit a person who has attempted suicide to a mental health facility for psychiatric evaluation. While the state legislature typically establishes certain statutory guidelines, how each jurisdiction applies these statutes in written policy and actual practice may vary. For instance, the specific mental health facility used, the hours of operations, the availability of physicians or psychiatrists, and the organizational forms used in the admission process will vary considerably in each organization. An OL training course will outline the general policies/practices used in the admission process; however, the learner would need to supplement these general policies/practices with the organization's specific policy/practice that must be used once the learner is on the job. The cognitive component of CLIM design will require the student to locate and review the written policies/practices regarding the admission process and give emphasis to the location of the mental health facility, the forms used by the learner's organization, and the availability of a physician or psychiatrist. The learner would summarize this information and provide any documents and the summary to the course facilitator. This would enable the course facilitator to ensure the policies/practices were correctly identified and the accuracy of the summary. The learner would then apply the summary information to several case illustrations whereby the learner would utilize the summary information, which is specific to the learner's organization to formulate a plan of action to solve the case scenarios.

The field component of the CLIM design would require the learner to tour the specific mental health facility used by the learner's organization to gain a better understanding of the physical layout of the building, specific procedures necessary in admitting a person into the facility for evaluation, and an overview of the admission process from the facility's perspective. The specific objectives of the field component would outline several key learning areas to ensure the tour was purposeful, as well as a signature of a representative of the facility to provide confirmation the field component was conducted.

The CLIM design was primarily designed for an OL environment rather than a face-to-face classroom environment due to the additional time span required to locate specific organizational policies/practices or other information. The flexibility in learner time span to complete OL training would provide the necessary time required for the CLIM design. The CLIM design could be incorporated in face-to-face or blended learning environments, but the block or continual running time nature of face-to-face courses may inadvertently limit the time span and form a barrier that would not otherwise exist in OL only environment.

Theoretical Framework

Constructivism theories and a current OL instructional design model will be used to present a conceptual foundation for the CLIM design. These theories and their incorporated in OL instructional design models will be discussed.

Constructivism

Constructivist theories generally state the learner is not simply a recipient of passive knowledge, but rather constructs the knowledge or meaning from the learner's prior experiences of the learning material in a particular context (Duffy, Lowyck, & Jonassen, 1993). The representation of meaning associated with knowledge would therefore differ depending upon the learner's prior experiences and the context in which new material was presented. Cooner (2005) argues that through dialectical constructivism learners must apply prior knowledge to and engage in specific learning contexts representative of job-related performance in order to construct meaningful knowledge that may be applied in organizational settings. When the prior experiences of the learner are used only to attach meaning to generic contexts, the learner may experience difficulty in constructing knowledge that would be beneficial to the learner's individual environment. The broad theory of constructivism provides a foundation to introduce to related theories that are of particular interest to OL and the CLIM design.

Collaborative constructivism is used by Garrison (1997) to describe self-directed learning whereby the learner is responsible for constructing meaning while others participate in confirming knowledge. The collaboration is designed to afford the individual learner with an opportunity to learn personally meaningful information while also enabling the learning to transpire within the boundaries of context (i.e., society or an organization). The collaborative constructivism model of self-directed learning is similar to other self-directed learning models in two characteristics: facilitator involvement and the management of learning (see Brockett and Heimstra, 1991; Grow, 1991). Garrison introduces two additional elements in collaborative constructivism: self-monitoring and motivation. Self-monitoring is the ability of the learner to select appropriate and effective learning strategies and to monitor the success of these strategies in making personal meaning of the learning material. The ability of the learner to employ cognitive learning processes is a critical component to the success of self-directed learning. As a result, Garrison argues the process of constructing meaning and subsequent knowledge is too important to be left to the student alone. A facilitator should ensure correct and sufficient knowledge was gained by the learner's constructed meaning. The motivation component to self-directed learning pertains to two separate issues: the motivation to initially enter the learning process and to remain engaged in the learning activity. Garrison indicates the motivation of the selfdirected student to enter and remain engaged in the learning process is highly dependent upon the learner's perceived value obtained from the learning event and alignment with personal learning goals (i.e., employment).

The situated cognition model or situated learning, which is consistent with the constructivism, is a learning model designed to facilitate authentic learning by embedding learning in a specific context similar to application environments (Collins, 1991; Dabbagh & Bannan-Ritland, 2005). Stein (1998) indicates that "by embedding subject matter in the ongoing experiences of the learners and by creating opportunities for learners to live subject matter in the context of real-world challenges, knowledge is acquired and learning transfers from the classroom to the realm of practice" (p. 2). The importance of incorporating context specific material into the instructional design has been well documented (Driscoll, 2005; Knowles, Holton III, & Swanson, 2005). The incorporation of the situated learning model in instructional design has been suggested by Young (1993) to have four primary components: selection of appropriate learning contexts, scaffolding the progression of learning, coaching the student, and assessing the learning of the. The selection of the most appropriate learning contexts must identify meaningful instructional situations that will also connect with prior and developing knowledge. Similar to the collaborative constructivist model, the instructor will continually coach the student in applying knowledge and actions in the selected situations by drawing the learner's attention to important points. Assessing the effectiveness of the learning by the student requires the instructor to continually examine the learner's performance in developing and applying knowledge in specific situations. While the situated learning model and collaborative constructivism model were developed when OL was not widespread, many of the components are found in online instructional design models. Online Instructional Design Models

Two different OL instructional design models closely associated with constructivist theory are presented in this section. The first OL instructional design model proposed by Berge (2002) suggests successful learning will only occur when the learner's goals, instructional activities, and facilitator's feedback are aligned with the instructional design. Because a learner's goals are often associated with particular learning contexts, Berge, as suggested by the situated learning model, proposes situating the learning in a context that is meaningful to the student. The activities incorporated in the OL instructional design should incorporate active learning and interactivity. Active learning should incorporate opportunities for learners to think, reflect, and develop solutions to proposed contextual problems that are relevant to the individual learner. These activities are designed for the learner to make meaning through interaction of instructional content and peers. Facilitator feedback concerning the learner's performance is critical for ensuring the accuracy of knowledge, coaching and motivating the learner, and "linking the learning goals of the course to relevancy in the workplace" (p. 186). Employing an instructional facilitator to ensure the accuracy of the

knowledge construction by the student and to guide the learner in the instruction are key components of the collaborative and situated learning models.

Dabbagh and Bannan-Ritland (2005) developed a comprehensive OL instructional design model focusing on the development of authentic learning activities (ALA), which are designed to promote problem solving skills in a realistic setting and to ultimately promote learning transfer. The ALA model is intended to occur within a self-directed environment encompassing supportive, exploratory, and dialogic strategies. Consistent with the collaborative constructivism and situated learning models, supportive strategies call for the instructor to assume a coaching role to guide the learner in the learning process and to ensure the correct type and amount of learning has occurred. Additional supportive strategies include scaffolding learning content to gradually introduce more complex and difficult learning content, and to model/explain the learning content. Exploratory strategies focus on providing the learner with problem solving opportunities, which are resolved by generating a hypothesis to a problem, and exploring the potential outcomes of a particular hypothesis. The specific problem solving opportunities may incorporate relevant learner oriented problems or potential organizational problems, which would be used by the learner to develop plausible solutions that will be reviewed by the facilitator and other class members. Dialogic strategies involve promoting the learner to articulate their actions and decisions in solving problems and to enable the learner to incorporate the perspectives of others into developing a flexible solution to a problem. The strategies may integrate a variety of individual OL instructional methods.

Research Questions and Propositions

The potential benefits of the CLIM design include an increase in the transfer of learning to performance and an effective instructional methodology in OL environments. Although the CLIM design concept is also supported by different theoretical and OL instructional designs, little research has been done to verify the potential benefits and to apply the theoretical support to the constraints of practice. Three separate research questions guided the methodology, results, and discussion. These questions were designed to determine the perceptions of learners and administrators of the CLIM design, as well as any potential implementation issues. The following research questions were developed:

- 1. What are the perceptions of the learners toward the CLIM design?
- 2. What are the perceptions of the state-level administrators toward the CLIM design?
- 3. What state-level administrative implementation issues exist in utilizing the CLIM design?

Methodology

Sample

The design of the research utilized two separate focus groups composed three different sample populations. The focus group design was employed due to the exploratory nature of the research the potential qualitative data elicited from purposefully designed groups (Stewart & Shamdasani, 1998). The precise methodology used will be outlined in the following sections.

Context

An OL statewide law enforcement training program in a mid-western state was used to explore the usefulness and feasibility of the CLIM design. The training program is designed to provide basic academy training to new law enforcement officers through a blended-learning design whereby learners receive approximately 65 percent of the required training through OL and the remaining components are delivered in face-to-face environments over a nine month period. The OL program is being phased in slowly and will replace a video-based distance learning program currently distributed over a 12-month period. Upon completion of the training program and a state certification examination, the learners will become certified law enforcement officers.

Two separate focus groups were convened to discuss the usefulness and feasibility of the CLIM design. The first focus group (n=21) used was purposefully selected from two different sample populations of learners. The first subgroup was composed of learners (n=11) who completed the training program and who are currently applying the learning content in different organizations and communities. The second subgroup was composed of learners (n=10) who have completed approximately half of the training program. Both populations completed or were currently enrolled in the video-based distance learning program and both populations recently completed a pilot test of four different courses in the OL training program. The group's participation in the pilot test and involvement in video-based distance learning program uniquely situated its members in understanding the flexibility of distance learning. The populations were combined into a single focus group to increase the diversity of the group's composition, which

was believed to be essential in providing varying perceptions and in stimulating a dialogue in predicting the usefulness and feasibility of the CLIM design.

The second focus group (n=15) was constructed of state-level administrators and training coordinators of the video-based distance learning program. This group was purposefully selected for two reasons. First, the group is responsible for the administration of the statewide law enforcement IBL program. Second, the training coordinators are familiar with the issues in distance learning in law enforcement, and, as a result, they were in a position to provide critical feedback on the logistical implications of the CLIM design. The state-level administrators included policy makers, administrative personnel, and others responsible for the overall administration and regulation of the law enforcement training in the entire state. Their inclusion was important to ensure the CLIM design was adequately understood, supported, and was in compliance with state regulations. While both focus groups were primarily a sample of convenience, no other training program presented a similar opportunity to review the potential usefulness and feasibility of the CLIM design.

Instrumentation

Two separate instruments containing structured focus group discussion points were developed to gauge the potential usefulness and feasibility of the CLIM design. The learner focus group discussion points were peer-reviewed and modified by a group of instructional designers, former learners, and training specialists who are familiar with the CLIM design, specific distance learning issues in law enforcement training settings, and general adult learning concepts. The structured discussion points related to the awareness of variable learning application environments, the importance of learning specific organizational competencies, and the CLIM design in the form of several course examples that incorporated a CLIM design. Specific discussion questions included the awareness of organizational policy/practice differences in different organizations, soliciting specific examples of recognized organizational policy/practice differences, the importance of receiving and applying specific organizational policy/practice information prior to employment, the ability of the learner to complete CLIM cognitive and field components, and the estimated time required to complete the components relative to the amount of overall class time. The instrument was designed to elicit feedback and facilitate a discussion concerning the potential value and implications of the CLIM design.

A second instrument was designed for the state-level administrators and training coordinators. The instrument was peer-reviewed by the same group and included a state-level administrative representative to ensure any specific policy concerns were adequately identified and included in the instrument design. The focus group discussion points included a review of the difficulty of incorporating specific organizational policy/practice in general training courses, the same examples used in the learner focus group, and several points related to the implementation of the CLIM design. Specific discussion questions included the ability of the CLIM design to incorporate specific organizational policy/practice into general training, the course facilitator's ability to provide feedback, the increase in instructional demands of the instructional system (including instructors and students), increased financial costs in instructor and student time, increased planning demands, and the availability and willingness of organizations to release policy/practice information (research questions two and three). The instrument was designed to elicit feedback and facilitate a discussion concerning the usefulness and feasibility of the CLIM design.

Procedures

Two structured focus group meetings with the separate sample groups were scheduled on separate dates, approximately 4 weeks apart. The first focus group composed of current and former learners was held approximately 3 weeks after the students completed the OL pilot test at the normal face-to-face classroom training location. A convenient date for the training coordinator and sample population was selected. All students having participated in the OL pilot test were present. The researchers facilitated the structured discussion points and the subsequent dialogue. The discussion points were sequentially structured to determine if the learners were aware of the variable application environment of their respective organizations, how the variability may impact their performance in transferring the learning content, and the necessity in terms of individual learner motivation of providing specific organizational information in the training setting. After a brief discussion, the researchers presented the students with several course examples incorporating the CLIM design. The design itself was not introduced, but, rather the examples incorporated the cognitive and field components of the CLIM design. Discussions followed the initial discussion points and the course examples. Main themes were noted and reviewed with the group to ensure accuracy. The entire focus group interview was completed in approximately 2 hours.

The second focus group of state-level administrators was held during a state-wide meeting focusing on the development and deployment of the entire OL training program. The first discussion point was designed to illustrate the difficulty of incorporating specific organizational policy/practice in general training courses, which was followed by presenting the several course examples incorporating the CLIM design. The course examples used in the second focus group were the same course examples used in the first focus group. The final discussion points

concerning the perceptions of the participants regarding the CLIM concept and any potential implementation issues were reviewed. Notes were taken and key points reviewed with the group to ensure accuracy. The second focus group interview was completed in approximately 45 minutes.

Results and Findings

Current and Former Learners

Three separate discussion points were used during the focus group interview of current and former students. These related to the awareness of variable learning application environments, the importance of learning specific organizational specific policy/practice, and ability to complete the cognitive and field components.

There was a difference in the learners' awareness of the organizational specific policies/practices. The subgroup of learners having completed approximately half of the required training program were not fully aware of the differences in polices/practices in individual organizations. A majority of the learners in this group perceived the policies/practices to be the same in each organization with only subtle differences in terms of documentation. The subgroup of learners having completed the training program and applying the training content to an organizational setting quickly identified the difficulty in applying general training material in a specific organizational setting. These participants indicated it would have been highly beneficial to have received instructional material specifically designed for use in their particular organization. There was a general consensus that in some subject areas the differences in application of learning content from one organization to another is minor and would not necessarily benefit from the inclusion of customized instructional material.

Learner perceptions of the CLIM design.

The participants appeared to embrace the use of the CLIM design in certain courses. The participants identified several key training courses that would be most suitable for the CLIM design. The participants were enthusiastic about a training design that incorporated the specific policies/practices of their organization and using this information in responding to case scenarios. Several of the learners differentiated the value of applying general concepts to case scenarios and applying specific organizational policies/practices to case scenarios. Exposure to specific organizational policies/practices was seen as having a significant advantage after completing the program and transferring learning to job performance. As a result, many of the participants believed that the inclusion of specific organizational content would increase their motivation to learn, as they would recognize the material would be directly used upon completion of the training.

Learner perceived implementation issues.

The main learner perception themes included issues related to time, access to organizational policies/practices, and sharing of specific organizational responses. Many of the learners believed the total amount of learner time to a specific course, regardless if the course contained a CLIM design activity, should not exceed the total amount of time required to complete the course. For example, if the learners were required to complete a four-hour course over a one week period, the total learner time over the one week period should not exceed four hours. This observation was important because the CLIM design was not intended to increase the time of the training course, but, rather reallocate how the training time was spent. Access to organizational policies/practices was noted as a concern; however, participants believed if their organizations were made aware of the need for the information and how it would be used, organizations would provide the information. The last learner concern pertained to discussing specific organizational policies/practices in a group forum. The participants indicated this information may not pertain to all of the students and would essentially provide unnecessary information and hamper learning. *State-level Administrators*

Several separate discussion points were used in the focus group of the state-level administrators. The first group of discussion points reviewed the difficulty of incorporating specific organizational policy/practice information in general training courses and several course examples incorporating the CLIM design. The remaining discussion points focused on the perceptions of the participants regarding the CLIM design and any potential implementation issues surrounding the CLIM design.

State-level administrator perceptions of the CLIM design.

The participants recognized the problem of delivering general training in variable application environments and believed in many cases the specific organizational policies/practices would most likely be obtained during on-the-job training. The suggestion of providing learners with an opportunity to review and apply specific organizational content during general training was perceived as a beneficial instructional design element. The group believed this knowledge would enable the learner to become aware of how specific organizational policies/practices influence their job performance. Additionally, the required amount of supplemental training could potentially be reduced or

the current supplemental training time could be reallocated to learning other organizational specific policies/practices.

State-level administrator perceived implementation issues.

A majority of the discussion centered on the logistical and cost-effectiveness of the CLIM design. Logistically, it would require a considerable amount of prior planning and support from the learners' organizations. The degree to which this was an issue was unknown, as this was a new instructional methodology and further research was believed to be necessary. The cost of the CLIM design concerned three areas. First, the CLIM design may require additional course facilitator time and may involve a higher cost. Second, the amount of time required, depending on the type of CLIM design used, may exceed the required course allotted time. Third, it was unknown if the learner's time and travel costs during the field component would increase the cost of the overall training program. A discussion expanded on each of these topics. These costs were later minimized after the focus group had concluded. A new "flat fee" instructor payment system was established for OL instructors and any additional time would be absorbed by the fee. If there was an increase in class time, the increase was believed to be minimal if nonexistent and was thought to compensate for the classes experiencing a decrease in class time. Since the cognitive and optional activities were organizational specific and in close geographical proximity to the learner, any associated travel costs and time were determined to the responsibility of the leaner. The state-level administrators provided reserved support for the use of the CLIM design and believed additional research into the previously mentioned perception and implementation issues may provide the necessary information to make an informed decision.

Conclusions and Recommendations

The CLIM design has the potential to enable instructional designers of general training to incorporate the specific learner application competencies into the overall design of the training program. The benefits of including specific organizational policies/practices into general training courses would increase the motivation to learn the training content, enable the student to construct organizational specific knowledge, and could possibly reduce the amount of supplemental training time necessary to transfer the learning to job performance.

Conclusions

The current and former OL learner participants largely embraced the CLIM design. As suggested by Berge (2002), the participants indicated the presentation of specific organizational policies/practices and the application of these policies/practices to specific case scenarios would increase their amount of motivation to learn the material. Additionally, the participants implied that the customized training content would provide a rich learning experience that would be directly applied to their job performance. This belief is coincides with the benefits of situated learning as suggested by Stein (1998). These observations were particularly evident in those participants attempting to apply general and previously learned content to varying application environments or organizational settings.

The perceptions of the state-level administrators were mixed, and they were cautiously supportive. While the potential of the CLIM design was recognized as an effective method to present specific instructional content in the OL training program and as a means to possibly reduce the amount of supplemental training time, additional research would be necessary to make an informed decision. *Limitations*

The research conducted to support the CLIM design was limited on many levels. The focus groups were designed to identify the usefulness, feasibility, and implementation problems associated with the CLIM design and did not evaluate an actual implementation of a CLIM design, which is a main component of the second part of this study. The participants in the learner focus group were familiar with distance learning training programs and may have associated the CLIM design with the aesthetic appearance and usability features of the OL program. The relatively narrow field of law enforcement and small sample size only supports the predicted feasibility and usefulness of the CLIM design. Additional research is necessary to validate the CLIM design as an effective instructional methodology to incorporate specific organizational polices/practices in general training courses where learners will apply the training content to variable application environments. *Recommendations*

The use of the CLIM design must be carefully applied in OL environments. The CLIM design may require additional time by the learners to locate organizational policies/practices and additional time required by course facilitators to provide learners with general guidance and sufficient feedback. The monetary cost in terms of learner time and instructional planning must be applied to the potential reduction in supplemental training time and increased depth of learning specific organizational policies/practices. When the cost and time of CLIM design outweigh the potential learning benefit of the students or will unlikely reduce the amount of supplemental training

time (if applicable), other instructional methodologies may be better suited to meet the needs of the learner and organization.

The instructional designer must also determine if the learners possess the necessary cognitive learning skills necessary for effective self-directed learning. When a learner lacks the essential cognitive skills to engage in self-directed learning, the CLIM design is likely to result poor learning gains, intimidation of an OL training program, or require a substantial increase in the amount of time a facilitator will spend providing individual instruction.

While the findings were positive, the CLIM design requires additional research to determine the actual usefulness and reductions in supplemental training time to the organization. The CLIM design provides instructional designers with another design tool in which to design OL training courses in variable transfer environments. The CLIM design should be used in conjunction with other proven and appropriate instructional design methodologies to ensure a high degree of transferring training content to job performance.

How This Research Contributes to New Knowledge in HRD

Human resource development (HRD) practitioners are continually developing solutions to organizational problems at many different levels. Training has often been used as a solution to many of these problems; however, HRD practitioners have faced decreasing budgets and an increased need to demonstrate the transfer of learning to measurable job performance. Coupled with the marginalization of effective or appropriate OL instructional designs, the CLIM design provides HRD practitioners with another instructional strategy to facilitate learning and to increase the transfer of learning to job performance.

References

- Berge, Z. L. (2002). Active, interactive, and reflective elearning. *The Quarterly Review of Distance Education, 3*(2), 181-190.
- Brockett, R. G., & Hiemstra, R. (1991). *Self-Direction in adult learning: Perspectives on theory, research, and practice*. New York: Routledge.
- Collins, A. (1991). Cognitive apprenticeship and instructional technology. In C. R. Dills & A. J. Romiszowski (Eds.), *Instructional development paradigms*. Englewood Cliffs, NJ: Educational Technology Publications.
- Cooner, T. S. (2005). Dialetical constructivism: Reflections on creating a web-mediated enquiry-based learning environment. *Social Work Education*, 24(4), 375-390.
- Dabbagh, N. (2004). Distance learning: Emerging pedagogical issues and learning designs. *The Quarterly Review of Distance Education*, *5*(1), 37-49.
- Dabbagh, N., & Bannan-Ritland, B. (2005). *Online learning: Concepts, strategies, and application*. Upper Saddle River, NJ: Pearson.
- Doerksen, T. (2002). Development approaches. In H. Adelsberger, B. Collis & J. Pawlowski (Eds.), *Handbook on information technologies for education and training*. New York: Springer-Verlag.
- Driscoll, M. P. (2005). Psychology of learning for instruction. New York: Pearson.
- Duffy, T. M., Lowyck, J., & Jonassen, D. H. (1993). *Designing environments for constructivist learning*. New York: Springer-Verlag.
- Garrison, D. R. (1997). Self-directed learning: Toward a comprehensive model. *Adult Education Quarterly*, 48(1), 18-34.
- Johnson, S. D., & Aragon, S. R. (2003). An instructional strategy framework for online learning environments. *New Directions for Adult and Continuing Education*, 100, 31-43.
- Knowles, M., S., Holton III, E., F., & Swanson, R., A. (2005). The adult learner. New York: Elsevier.
- Macpherson, A., Elliot, M., Harris, I., & Homan, G. (2004). E-learning: Reflections and evaluation of corporate programmes. *Human Resource Development International*, 7(3), 295-313.
- Mioduser, D., & Nachmias, R. (2002). WWW in education. In H. Adelsberger, B. Collis & J. Pawlowski (Eds.), *Handbook on information technologies for education and training*. New York: Springer-Verlag.
- Stein, D. (1998) Situated learning in adult education. Columbus, OH. (ERIC Document Reproduction Service No. ED418250)
- Stewart, D. W., & Shamdasani, P. N. (1998). Focus group research: Exploration and discovery. In L. Bickman & D. Rog (Eds.), *Handbook of applied social research methods*. Thousand Oaks, CA: Sage.
- Yoon, S. (2003). In search of meaningful online learning experiences. *New Directions for Adult and Continuing Education*, 100, 19-30.
- Young, M. F. (1993). Instructional design for situated learning. *Educational Technology Research and Development*, 41(1), 43-58.